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Parapsychology: Fiction or Reality?

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ABSTRACT: Parapsychological studies have attracted an ever-increasing amount of attention throughout the world. Therefore, the time is ripe to express the viewpoint of the U.S.S.R. Society of Psychologists on this topic. There is no need for parapsychology to exist as a separate discipline. The phenomena in question could best be studied by such scientists as psychologists, physiologists, physicians, biophysicists, and information theorists. Special attention should be paid to individual persons who demonstrate unusual abilities. Obviously, some so-called parapsychological phenomena actually do happen; however, the main obstacle to the acceptance of their existence is the ignorance of the basis for their operation.

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Parapsychology: Fiction or Reality?

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The question put forward in the title of this article has been discussed for decades in world scientific and popular literature. Long periods of calm have alternated with periods of agitation with respect to disclosures on this or that paranormal phenomenon. The authors of the present article do not regard themselves as specialists in the field of parapsychology. However, the increase in the number of articles (mostly in popular scientific publications) both in our country and abroad, on parapsychological observations as well as research conducted on persons having paranormal abilities, have forced us to address ourselves to this issue. One must stress that the overwhelming majority of articles on this topic are authored by journalists and only in certain instances are articles by professional scientists, such as psychologists and physiologists, published. Though the journalistic publications often have publicity value, they do not come up to the generally accepted

rigorous standards of scientific research. Nevertheless, they are often sympathetically received by scientists of various disciplines, not to speak of their favorable reception by the general public.

In this respect, the results of polls conducted in 1972 and made public in January, 1973, by the editorial board of the British journal, New Scientist, are significant. In all, 72,000 questionnaires were sent out. Of the 1,500 scientists who responded, about 70 per cent were of the opinion that paranormal phenomena are either firmly established (25 per cent) or entirely probable (42 per cent).

We have no similar data indicating the attitude of Soviet scientists toward this topic, but many irresponsible publications have treated parapsychology in our country in a way which deeply concerns us. For this reason, we believe that the time is ripe to express the viewpoint of the U.S.S.R. Society of Psychologists toward parapsychology, the status of which was discussed at one of the meetings of the Society's Presidium.

The Field of Parapsychological Research

In the Encyclopedia of Philosophy, parapsychology is defined as a field of research which basically studies (1) forms of perception affording a means of receiving information which cannot be explained by the known senses, and (2) corresponding forms of the impact of an organism on physical phenomena.

occurring outside the organism without assistance of muscular efforts, e.g., by intent, mental influence, etc.

The majority of contemporary parapsychologists distinguish the following categories of phenomena:

Telepathy: Mental communication between a person transmitting information and one receiving information (referred to as the sender and the recipient). With the help of telepathy, two persons exchange information with no action of the known sense organs. In essence, telepathy is the ability to obtain information from another living being.

Clairvoyance: Perception of certain events, phenomena, and objects, which provides an individual knowledge without the participation of the known sense organs.

Precognition: The foretelling of events based on the reception of information from the future which cannot be based on the laws of reason. This may be a particular type of clairvoyance.

Dowsing: The means by which persons with the help of an antenna or rod (a bent metallic wire, branch from a tree, etc.) can allegedly detect the presence of underground water, ores, voids and other target objects. This is often referred to as a "biophysical effect."

Paradiagnostics. Medical diagnosis based on clairvoyance in which there is no contact with the patient.

The above forms of sensitivity are often lumped together

under the term "extrasensory perception" or ESP. However, there also exist a class of influences on physical phenomena:

Psychokinesis: The mental influence of a person on surrounding objects, ^{direct} ~~or even~~, for instance, on the normal electrical activity of a plant, or on the position in space of various items (generally light weight objects).

Psychophotography: A specific case of psychokinesis in which a mental image is projected onto a concealed photographic emulsion, which a person staring into the lens of a camera imprints on the film a mental representation of an object that he imagines but which is in reality not present.

Paramedicine: A field connected with parapsychology which involves unexplained methods of treatment such as healing by ^{effected by} non-medical techniques the laying on of hands and a form of mental suggestion in which healing is attempted without immediate contact, sometimes at a great distance.

All these phenomena are studied by the field described as "parapsychology," and sometimes termed "psychotronics," or "psychoenergetics." Not long ago, hypnotic phenomena were unjustifiably regarded as parapsychological. Today, in the context of parapsychology, hypnosis is used as one of the methods by which paranormal phenomena are allegedly produced, but is not considered to be paranormal. Often the abilities of yogis are incorrectly considered to be paranormal. Sometimes even astrology is included in the "discipline" of parapsychology.

To some observers, there is a single underlying mysterious

"force" or enigmatic "principle" that serves as the basis for uniting and explaining these phenomena. However, to consider such a single basis as adequate for explaining all the phenomena in such a complex field of scientific research is, in principle, simplistic and incorrect.

Brief Historic Overview and the Status of Parapsychology Abroad

Since ancient times, paranormal abilities have been ascribed to shamans, wizards, lamas, yogis, and the like. However, we will not survey that topic but will move to the scientific. In Europe, parapsychology, as a method of systematic experimental research and observation, came into being in 1882 with the organization, in London, of the Society for Psychical Research. This organization, which is still in existence, was the first parapsychological research society. Since that time, numerous analogous societies have been organized in many countries, most of which lasted only a short period of time. At the present time, there exist many parapsychological societies; most of them are non-professional in nature and enroll only a small membership. Some of the societies are provided with small laboratories by private funds and by the dues collected from the organizational membership. Scientifically-oriented members of the professional societies are affiliated with the Parapsychological Association, an international organization which has its headquarters in the United States. In 1959, the American Association for the

Advancement of Science, which unites various scientific societies in the United States, admitted the Parapsychological Association to its membership.

Parapsychological research in the U.S.A. is carried on at a limited number of universities and other scientific research centers. According to unofficial sources, the American federal government spends between one-half and one million dollars a year on parapsychological research. Some large firms also lend financial support to the research. One such new organization is the corporation recently created by Edgar Mitchell, the American astronaut who was involved in four sessions of attempted telepathic communication during his flight to the moon. (A definitive, credible result was not obtained from this study.) The goal of Mitchell's corporation is to develop paranormal human abilities and to carry on research in such areas as paramedicine and psychokinesis. Mitchell hopes to make his corporation self-supporting. Among its consultants are the well-known space scientist Werner von Braun, as well as several scientists from fairly respectable research centers. An Academy of Parapsychology and Medicine is also active in the United States, with its headquarters in California.

According to statistics compiled by parapsychologists, there exist more than 240 laboratories and societies in 30 countries of the world. However, this estimate significantly overstates the scientific work being done in parapsychology.

Furthermore, the majority of these organizations exist in the U.S.A.

Independent and, as a rule, small-scale scientific research projects of a parapsychological nature are undertaken from time to time in the medical laboratories of the U.S.A. It is known that in these laboratories, computer-assisted research aimed at establishing the existence of extrasensory perception is being performed.

Foreign Publications

Results of parapsychological research are usually published in specialized journals in a number of countries. In America there are more than ten such journals, as well as five in the United Kingdom, six in Italy, and two in France. Several of these publications incorporate parapsychology and astrology. There are also publications in many other European countries and in Japan. In addition, some scientific publishing houses publish a large number of parapsychological monographs as well as proceedings of parapsychological conferences and symposia.

Material on parapsychology, especially of a sensational nature, is given broad exposure in such publications as Look and Stern. Occasionally, such respectable scientific journals as Science and Nature publish articles about parapsychology. As a rule, however, scientific journals in the fields of psychology, physiology, and the other sciences do not publish articles on parapsychological research. Between 1960 and 1970, the world's

scientific psychological journals published only 13 experimental parapsychological investigations. Of that number, positive results were reported in eight cases, the existence of para-normal phenomena in the other five being unconfirmed. It is interesting that during the same period, the world's parapsychological journals published 143 experimental research projects with positive results, and 19 with negative ones (Billig, 1972). This number does not include surveys, critical notes, and reports about uncontrolled observations. A large number of handbooks and textbooks on how to conduct parapsychological research have been published as well, the latest, a study guide by R. H. Ashby, appearing in 1972.

The International Union of Psychological Science has not accepted reports on parapsychological research for presentation at its Congresses. A sole exception was made at the 20th International Congress of Psychology, held in Tokyo in 1972, when a report by the American parapsychologist S. Krippner, was presented.

While discussing publications, one should not omit certain attempts at political gain connected with parapsychology. We have in mind primarily a book by S. Ostrander and L. Schroeder, Psychic Discoveries Behind the Iron Curtain. This book was written as a result of the authors' visit in 1968 to the U.S.S.R., Bulgaria, and Czechoslovakia. The authors (who are not scientists) composed a low-level work with cheap publicity as its main goal.

The "parapsychology" in their book is used to advertise anti-Sovietism and vice-versa. The whole effort was very successful commercially and in less than two years the book went through five printings. However, the book is written at a very low professional level, abounds in factual errors, and contains overtly anti-Soviet statements. Furthermore, it exaggerates the "achievements" of Soviet "parapsychologists." One often meets with similar exaggerations on Soviet "parapsychological achievements" in the Western media, especially in parapsychological publications and the mass press, but usually without such openly anti-Soviet overtones. Frequently, one encounters speculations on the theme of parapsychology and national defense, psychological warfare, intelligence gathering, etc. All this speculation probably serves as a means of obtaining financial support for parapsychological research. However, the general stream of parapsychological literature simply does not contain evidence that these applications of parapsychology are frequently made.

Parapsychology in the U.S.S.R.

In the 1920s, Professor L. L. Vasiliev, a student of Academician V. M. Bekhterev, conducted research in Leningrad in the areas of telepathy and clairvoyance. Bekhterev originally joined Vasiliev in this work. Similar research was conducted in the Ukraine by B. B. Kazhinsky; both Vasiliev and Kazhinsky set forth the results of their research in scientific monographs

and books (e.g., Vasiliev, 1964).

In the U.S.S.R. there is no society which unites parapsychologists. The proponents of this kind of research have from time to time joined together to work within sections of other societies which have usually been scientific and technical in character. In 1965, a bioinformational section was organized within the Moscow Division of the Popov Scientific-Technical Society for Radio-Engineering and Electro-Communication. The basic area investigated by that group has been telepathic communication.

In 1967, an All-Union Section for Technical Parapsychology and Bicintrescopy was organized within the Central Administration of the Scientific-Technical Society of the Instrument-Building Industry. In 1968 and 1971 two scientific technical seminars on the "biophysical effect" (e.g., dowsing) were held under its auspices; in addition, a joint commission for coordinating work on the problem of the "biophysical effect" was elected. There are other individuals and small groups working in various research institutions and scientific organizations who, either during their working time or their spare time, conduct research on parapsychological effects.

In Nizhni Tagil and other cities in the Urals, research on the "dermal-optical effect" (the so-called "effect of Roza Kuleshova") has been conducted for a number of years. "Dermal vision" is often included in the circle of parapsychological phenomena; actually, it has nothing in common with it. Taking

into account the results of numerous verifications and analogous cases observed both abroad and, more recently, in Moscow, it would seem that the "dermal vision" phenomenon actually exists and requires careful study. For the time being, however, it is certainly difficult to make definite conclusions about its mechanisms.

Publications in the U.S.S.R.

In the U.S.S.R., materials concerning parapsychology are usually published in collections of abstracts and the proceedings of different conferences and symposia. Thus, in 1972, five reports on psychokinesis were published in the proceedings of a conference entitled "Some Questions on the Biodynamics and Bioenergetics of the Organism in Normal and Pathological States; Biostimulation by Laser Radiation," held at Kazakh State University. Soviet parapsychologists occasionally publish their results in technical journals (e.g., Radiotechnology) but, for the most part, they appear in popular science magazines with mass circulation (targeted mainly at young people) and in newspapers. Usually these articles present reports about foreign accomplishments.

A great number of stories are written by journalists who, with their characteristic penchant for exaggeration and sensationalism, sometimes describe barely positive results as entirely credible. These kind of publications are numerous. It will suffice to mention such magazines as Technology for Youth,

The Young Naturalist, and Knowledge is Power. In 1973, Socialist Industry also began to treat parapsychological themes. The popular media usually do not pay any attention to the negative results published by parapsychological specialists in scientific journals.

In both Soviet and foreign publications one may typically find exaggerations of the results obtained. Thus, judging by reports in the American press, long distance telepathy experiments were organized in 1966 between Moscow and Novosibirsk, and between Moscow and Leningrad, which achieved positive and reliable results. All of this is pure fiction. In the U.S.S.R., Komsomol Truth reported that in the telepathy tests between Earth and "Apollo 14," reliable results were obtained. Edgar Mitchell, an organizer and participant in these experiments, wrote that the experiments were primarily done for public relations purposes, that the results were equivocal, and moreover, that the number of successes was much lower than the theory of probability would predict. The latter conclusion would have deserved more attention were it not for Mitchell's statement about the "public relations" aspect of the experiments. Our press also devoted special attention to Nina Kulagina, who has become a universal object of telepathic and psychokinetic research.

In the past decade, no less than 500 articles treating various aspects of parapsychology were published in the U.S.S.R. Most of them are reports about poorly conceived "experiments"

which deserve no serious attention. Their authors took no account of the standards of precision formulated for these experiments by the leading parapsychologists themselves.

Who are the Parapsychologists?

The majority of parapsychologists are individuals who have had no training in biology or psychology. Among them are a significantly large number of workers in the exact sciences: engineers, mathematicians, and physicists who, as a rule, have no psychological training. In the last decade, these specialists very often (and without sufficient reason) changed their jobs for positions in medical, physiological, or psychological institutions. A number of them desired to plunge into researching the most mysterious and most interesting things. As a rule, these parapsychologists are either persons qualified in their own fields but unqualified in psychology, who happen to have observed some "amazing" psychological phenomena, or they are persons who have become victims of fraudulent charlatans.

Parapsychologists often have an entirely practical motivation, for instance, to discover through their studies of telepathy, a new means of communication in order to be able to transmit important information, or through their studies of psychokinesis, to discover a new form of energy in order to trip the detonating switch of an instrument from a distance. Strangely enough, some scientists often show themselves to be childishly

credulous and naive. Among parapsychologists, one can find psychiatrists and doctors of other specialties who in their practice actually do observe anomalous phenomena which are hard to explain. Furthermore, they appear to observe these phenomena more often than their colleagues.

There also exists a category of rather clever persons who often have no serious background of any kind. These are the very people who assume the role of propagandists and impresarios for those who actually possess unusual abilities. Usually, they are the ones who insist that parapsychology be recognized as a special, independent science.

Thus, among parapsychologists and their adherents are both serious specialists and charlatans. It is necessary to protect the former from persons who are scientifically unscrupulous and who use specialists for their own purposes.

The subjects of parapsychological research are usually individuals who possess heightened sensitivity. However, sometimes they are simply sick people who suffer from diseases of the nervous system. For instance, people who have "dormal vision" may also have distinctly expressed cerebral pathologies, fits of hysteria, etc.

During the first decades of parapsychology's existence, rather primitive methods of research and proof were used such as card guessing, the suggestion of dreams or thoughts, etc. But disinterested communications forced parapsychology to search for new

and more reliable means of proof.

A stream of engineers and physicists had a great influence on research methodology. Assuming that the human brain operates like an electronic apparatus and that it is possible to apply to its study concepts taken from corresponding branches of physics, they brought into parapsychology new methods of research. This accounts for the use of a whole series of the modern technical methods, particularly computer and laser techniques.

Many workers in parapsychology regard the paranormal phenomena they are studying as ordinary physical phenomena based on electromagnetic radiations. They are also of the opinion that this energy, despite its small quantity, can lend itself to calculation and measurement. The search for and the measurement of electromagnetic fields continue. These fields are called by different names ("bioplasma," "electrogram," "biopotential," etc.) and are combined with the different traditional methods of research (for instance, the guessing of one of five Zener cards, hypnosis at a distance, moving objects without contact).

In the framework of parapsychology, fine progress has been made with instruments (including the most sophisticated devices) to appraise the functional state of individuals. For instance, the "Kirlian effect" (photography of live tissues exposed to high frequency current) was used by parapsychologists before it was used by physiologists and psychologists. Thus, some individual research methods developed in parapsychology sometimes

turn out to be useful for psychophysiology and experimental psychology, even if they were not successful in revealing the nature of parapsychological phenomena.

Non-instrumental methods of parapsychology are also being perfected. Ten years ago, L. L. Vasiliev wrote about experiments with "free material" in which the subject attempts to find out something about a given object among a great number of possible objects, the given object being unknown to him at the moment of the experiment. Vasiliev (1964:134-135) wrote: "The unavoidable shortcoming in such experiments lies in the fact that their evaluation is subjective but it is hardly possible to remove this subjectivity." Since that time, a method of analyzing results with the help of a "jury" was worked out. The "jury" knows what was "received," what could have been transferred, and from what was received, they attempted to find out what was actually transferred. If this is possible, then the existence of a channel of communication between the points of transmission and reception is proven. M. M. Bongard and M. S. Smirnov (1967) wrote about this and other necessary or useful methods in an article on the requirements for telepathic experiments.

The Problem of Credulity in Parapsychological Research

The history of parapsychology is a history of the unmasking of fraud in which world-famous scientists such as Dmitri Mendeleev, the American physicist, Robert Wood, and others

occasionally participated. This naturally has engendered distrust of parapsychologists as well as irritation on the part of the specialists themselves. The distrust is increasing because, all too often, instances of outright mystification and fraud during demonstrations of parapsychological phenomena are observable. The second reason for distrust is the fact that paranormal phenomena cannot be reproduced. Therefore, they do not meet requirements for scientific acceptance.

The impossibility of reproducing parapsychological phenomena is explained by pointing to difficulties in setting up adequate experiments due primarily to the peculiarity of the phenomena themselves. Since they arise during special states and conditions in real life, it is difficult to recreate them in the laboratory. The phenomena described by parapsychologists are frustratingly unstable; they vanish as soon as external or internal conditions become unfavorable. Some parapsychologists state that even when favorable conditions are present, it is still not possible to preserve for long periods of time those states during which parapsychological phenomena can occur. This constitutes the main difficulty in interpreting parapsychological phenomena. Parapsychological literature is full of excessively sensational descriptions, like those about Ted Serios (the subject of the American psychiatrist, Jule Eigenhild) who purportedly visualized and then psychokinetically created on film Soviet rocket fast

There have been cases when professional stage performers, particularly magicians, were invited to take part in parapsychological sessions as experts in order to expose trickery. Generally speaking, therefore, parapsychology itself has brought forth a great number of methods of critical assessment and procedures which can be utilized in the demystification of these phenomena. There are specialists who have had great experience in that field in the Soviet Union. However, no demonstrations of fraud can influence convinced proponents of the validity of dubious phenomena. As with religion, so with the paranormal, "faith" is more important than the facts. The aggressive urge to propagate paranormal phenomena as well as a tendency toward communalism and frauds of every kind are linked precisely to that "faith."

It is fitting to quote C. H. N. Emden (1936) author of an important critical book on parapsychology published in 1970 in the U.S.S.R. Emden (1970:295) wrote, "One cannot categorically claim that the results of these experiments are explained by fraud, but also one cannot believe that they offer final proof of extrasensory perception."

Obviously some so-called parapsychological phenomena actually do happen. However, the main obstacle to the acceptance of their existence is the fact that the channel for transmitting information of influences is unknown. At the present time,

electromagnetic field of organisms as a biological link or carrier of information. The research is being conducted on insects, animals, and humans, but many of the researchers do not connect their work to parapsychology, at least not overtly. The physical basis for these phenomena still remains to be discovered.

Many parapsychologists hold that the physical basis for the phenomena eludes study because serious science stands aloof from parapsychological research. However, it seems to us that a great deal of the blame should be assumed by the parapsychologists themselves for engaging in many activities which set them apart from serious science.

Some Results

In the field of parapsychology, one must differentiate between imagined "supernatural" phenomena touted by mystics and charlatans on the one hand and phenomena which really exist but have not yet been satisfactorily explained scientifically, either psychologically or physically, on the other. The first require exposure and demystification. As for the second, it is necessary to continue their study in psychological, physiological, biophysical, medical, and other scientific institutions. However, the dissemination of the totality of parapsychological ideas in aspects and forms that often aim principally at publicity play a negative role, and feed the needs of unstable persons who seek scientifically inscrutable principles.

An analysis of the status of parapsychology indicates that it is polluted with anti-scientific conceptions and, that, to a great degree it has become a field of activity for would-be "experts." Some of these "experts" declare themselves to be leaders of groups and collaborators in organizations which have never existed in our country. "The Institute of Technical Parapsychology" is an example of such an organization. It is necessary to put an end to the activity of poorly qualified but militant parapsychological "experts" who take upon themselves the role of voluntary and far from unselfish propagandists and who issue numerous reports and give lectures on parapsychology for audiences which even include scientists. These lectures offer an unscrupulous mish-mash of fantasy and fact.

The non-critical stand toward parapsychology on the part of some serious scientists can be explained only by a lack of concern for scientific theory and for a sound philosophy of science. Thus, there is no need for the existence of parapsychology as a special discipline since the only factor that unites parapsychologists is the mysterious, enigmatic nature surrounding the phenomena they study. We also hold that the practice of publishing sensational material on parapsychology which lacks any scientific basis in newspapers, magazines and popular books, cannot be tolerated. A tradition which self-respecting scientists normally follow is for some reason being broken by many parapsychologists. They need to adhere to the

practice of serious scientific achievements being published first in the specialized literature and only afterwards in popular editions.

Certainly the time has come to bring order into the scientific research and study of the phenomena described in parapsychology. Much of the research in the field of parapsychology is being done by physicists and engineers. Therefore, it would be expedient to assess, at the Institute for Biophysics of the U.S.S.R. Academy of Sciences and at the Institute for Problems of Transmitting Information of the U.S.S.R. Academy of Sciences, the direction and scientific level of the study of the "biophysical effect" (dowsing). The electromagnetic fields generated by living organisms could be likewise assessed as a possible means of biological information (telepathy), as well as many other phenomena. If attention is paid to these phenomena from the point of biophysics and information theory, these efforts will help to demystify them.

The psychological institutes of the U.S.S.R. Academy of Sciences and of the U.S.S.R. Academy of Pedagogical Sciences and other psychological institutions should also give consideration to the possibility of mounting programs for a strictly scientific research into these phenomena. Evidently it would be advisable to organize a laboratory within one of the psychological institutions which would study persons who really do possess unusual abilities. It may be found that many of

these unusual abilities are not necessarily paranormal in nature. The results of such research after meticulous verification should naturally be published first in the scientific literature and only afterwards in the popular press.

We believe that the attention of serious scientific organizations toward the phenomena described in parapsychology could help to discover their true nature as well as to thwart the charlatans who are taking advantage of an understandably natural interest on the part of a wide audience toward many unresolved mysteries of the human psyche. Such an effort could also help to discredit the myth about the existence of a major "parapsychological movement" in the U.S.S.R.

References

Ashby, R. H. Guidebook for the Study of Psychical Research.

New York: Samuel Weiser's, 1972.

Billig, M. Positive and negative experimental psi results in psychology and parapsychology. Journal of the Society for Psychical Research, 1972, 46:

Hansel, C. E. M. ESP: A Scientific Evaluation. New York: Scribner's, 1966. Published in the U.S.S.R. under the title Parapsychology, Moscow: Mir Publishing House, 1970.

Krippner, S. Paranormal effects in altered states of consciousness: an experimental approach. In Abstract Guide, Twentieth International Congress of Psychology (Organizing Committee of the Twentieth International Congress of Psychology, ed.). Tokyo: N. Sasaki, 1972, p. 579.

Ostrander, S., & Schroeder, L. Psychic Discoveries Behind the Iron Curtain. Englewood Cliffs, N.J.: Prentice-Hall, 1970.

Vasiliev, L. L. Mysterious Phenomena of the Human Psyche. Third edition. Moscow: Political Literature Publishing House, 1964.